

**Listing of Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-48 (canceled)

49.(currently amended) A method of ~~providing~~ designing a custom orthodontic appliance for repositioning teeth of a patient comprising:

communicating, from an orthodontic practitioner, three-dimensional information from the mouth of a patient of the shapes of the teeth of the patient;

displaying, on a computer display for inspection by a person viewing the display, images of the teeth of the patient in suggested tooth positions and orientations that are based on the three-dimensional information;

communicating, from a person viewing the display, ~~feedback~~ information regarding ~~[[the]]~~ suggested tooth positions ~~[[and]]~~ or orientations toward which the teeth of the patient are to be moved by orthodontic treatment;

providing a ~~custom~~ design of ~~[[an]]~~ a custom orthodontic appliance that is configured to urge the teeth of the patient, when installed thereon, toward tooth positions and orientations and that ~~has been manufactured~~ is based on the suggested tooth positions and orientations in accordance with the ~~feedback~~ information communicated from the person viewing the display.

50.(currently amended) The method of claim 49 wherein:

the person viewing the display is an orthodontic practitioner; and

the ~~feedback~~ information communicated from the person viewing the display includes information selected from the group consisting essentially of information of changes to the suggested tooth positions, information of changes to the suggested tooth ~~or~~ orientations, and information approving tooth positions and orientations toward which the teeth of the patient are to be moved by the appliance.

**51.(currently amended)** The method of claim **50** further comprising:  
providing the person viewing the display with a computer interface and displaying the images thereon;  
providing the computer interface with a capability for the entry by the person viewing the display of the **feedback** information communicated from the person viewing the display.

**52.(currently amended)** The method of claim **49** wherein:  
the **feedback** information communicated from the person viewing the display includes information of changes to the suggested tooth positions or orientations;  
the method further comprises redisplaying images of the teeth in tooth positions and orientations revised in accordance with the **feedback** information communicated from the person viewing the display for inspection by the person viewing the display.

**53.(previously presented)** The method of claim **49** wherein:  
the three-dimensional information is derived at least in part from an impression of the teeth of the patient from the orthodontic practitioner; and  
the displaying of the images of the teeth of the patient is in response to data digitized from a model of the teeth made from the impression.

**54.(previously presented)** The method of claim **49** further comprising:  
communicating the three-dimensional information to a remote computing facility for the derivation of the suggested tooth positions and orientations from the three-dimensional information; and  
displaying digital images of the teeth of the patient in the suggested tooth positions and orientations on the computer display.

**55.**(previously presented) The method of claim **49** further comprising:  
communicating the three-dimensional information to a remote computing facility for the derivation of the suggested tooth positions and orientations from the three-dimensional information; and  
displaying digital images of the teeth of the patient in the suggested tooth positions and orientations on the computer display;  
communicating, to an orthodontic appliance manufacturing facility having equipment thereat for manufacturing the custom orthodontic appliance, data that includes three-dimensional information of the shapes of the teeth of the patient and information regarding tooth positions and orientations toward which the teeth of the patient are to be moved by orthodontic treatment; and  
receiving from the orthodontic appliance manufacturing facility the custom orthodontic appliance for providing the appliance to the orthodontic practitioner for the treatment of the patient.

**56.**(previously presented) The method of claim **49** further comprising:  
communicating, to a remote orthodontic appliance manufacturing facility having equipment thereat for manufacturing the custom orthodontic appliance, data that includes three-dimensional information of the shapes of the teeth of the patient and information regarding tooth positions and orientations toward which the teeth of the patient are to be moved by orthodontic treatment; and  
receiving from the remote orthodontic appliance manufacturing facility the custom orthodontic appliance for providing the appliance to the orthodontic practitioner for the treatment of the patient.

57.(currently amended) The method of claim 49 wherein:

the ~~feedback~~ information communicated from the person viewing the display regarding the suggested tooth positions and orientations toward which the teeth of the patient are to be moved by orthodontic treatment includes information selected from the group consisting essentially of information of changes to the suggested tooth positions, information of changes to the suggested tooth ~~or~~ orientations, and information approving tooth positions and orientations toward which the teeth of the patient are to be moved by the appliance;

the method further comprises:

providing the person viewing the display with a capability for entering the feedback information communicated from the person viewing the display in the form of change data from an orthodontic practitioner into a computer indicating selected changes in the suggested tooth positions and orientations;

the computer being programmed for displaying on the computer images of the teeth in revised tooth positions and orientations in response to the feedback information change data.

58.(previously presented) The method of claim 57 further comprising:

establishing a digital communications link between a computer terminal and a digital computer at a remote location;

transferring the three-dimensional information in digital form to the remote location;

deriving with the digital computer at the remote location the suggested tooth positions and orientations;

communicating digital data of the suggested tooth positions and orientations from the remote location to the computer display;

communicating change data from the computer display to the computer at the remote location;

calculating the revised tooth positions and orientations with the digital computer at the remote location in response to the change data;

communicating digital data of the revised tooth positions and orientations from the remote location to the computer display.

**59.**(previously presented) The method of claim **58** further comprising:  
entering commands accepting tooth positions and orientations at the computer display;  
communicating entered commands accepting tooth positions and orientations to the remote location; and  
processing the data of the accepted revised tooth positions and orientations and of the three-dimensional information and designing of the custom orthodontic appliance with the digital computer at the remote location.

**60.**(previously presented) The method of claim **59** further comprising:  
transmitting data of the designed custom orthodontic appliance from the remote location;  
displaying images of the designed custom orthodontic appliance on the computer display in response to the transmitted data;  
transmitting appliance modification data to the computer at the remote location and redesigning the appliance with the digital computer at the remote location in response to the transmitted appliance modification data.

**61.**(previously presented) The method of claim **49** wherein:  
the custom orthodontic appliance includes positioning jigs having surfaces thereon that conform to the shapes of the teeth of the patient.

62.(currently amended) The method of claim 49 wherein:  
the custom orthodontic appliance includes positioning jigs having surfaces thereon  
that conform to the shapes of the teeth of the patient; and  
the method further comprises:  
locating the jigs ~~jig~~ on the patient with said surfaces ~~surface~~ conforming to  
shapes ~~the shape~~ of the ~~one or more~~ teeth,  
positioning the appliance on the one or more teeth with the jigs ~~jig~~, and  
bonding the appliance so positioned to the tooth.

Claims 63-83 (canceled)

84.(currently amended) The method of claim 52 wherein:  
the ~~feedback~~ information communicated from the person viewing the display includes  
information from an orthodontic practitioner approving the revised tooth positions and orientations  
as those toward which the teeth of the patient are to be moved by the appliance.

85.(currently amended) The method of claim 49 further comprising:  
displaying the ~~custom~~ design of the custom orthodontic appliance on a computer  
display ~~and accepting additional feedback information from a person viewing the display on which~~  
~~the custom design is displayed regarding the custom design.~~

86.(currently amended) The method of claim 85 wherein:  
the person viewing the display on which the design of the custom design orthodontic  
appliance is displayed is an orthodontic practitioner; ~~and~~  
~~the additional feedback information includes information selected from the group~~  
~~consisting essentially of information of changes to the displayed custom design and information~~  
~~approving the custom appliance design.~~

**87.**(currently amended) The method of claim **86** further comprising:  
providing the person viewing the display on which the design of the custom ~~design~~ orthodontic appliance is displayed with a computer interface and displaying the ~~custom~~ design thereon;  
providing the computer interface with a capability for the entry by the person viewing the display on which the design of the custom ~~design~~ orthodontic appliance is displayed of ~~the additional feedback~~ information.

Claims **88-89** (canceled)

**90.**(currently amended) The method of claim **49** further comprising:  
providing a custom orthodontic appliance that is configured to urge the teeth of the patient, when installed thereon, toward tooth positions and orientations and that have been manufactured based on the suggested tooth positions and orientations in accordance with the ~~feedback~~ information communicated from the person viewing the display.

Claims **91-110** (canceled)